

What we claim is:

1. A packet transferring apparatus which communicates between terminals belonging to networks comprising;

a main processor for executing a routing process, a filtering process, and a priority control process,

a first portion for determining whether or not a packet outputted from the main processor is conformable with a session establishment condition, and

a second portion for receiving and holding packet information from the first portion when the first portion determines that the packet is conformed and for providing a bypass of the main processor with subsequent packets belonging to a same session, based on the packet information.

2. The packet transferring apparatus as claimed in claim 1 wherein the first portion comprises a session establishment managing table where the packet information and priority information are preset according to a network management policy, and a session establishment managing processor for retrieving the table to determine whether or not the packet is conformed with the session establishment condition.

3. The packet transferring apparatus as claimed in claim 2 wherein the second portion comprises a session management table for dynamically holding the packet information relating to the same session provided by the session establishment managing processor, and a session management processor for retrieving the session management table to provide the bypass with the subsequent packets of the same session.

4. The packet transferring apparatus as claimed in claim 3 wherein when retrieving the session management table finds no conformed entry, the second portion inverts constituent information of each entry to repeat the retrieval.

5. The packet transferring apparatus as claimed in claim 3 wherein when a communication form is the TCP communication, an establishment or closure of the session is performed with a code bit of a packet format.

5 6. The packet transferring apparatus as claimed in claim 5 wherein the second portion uses an FIN of the code bit as a session closure flag, receives a packet in which the flag is set, closes the session when the session management processor further receives a subsequent reception response packet for closure, and deletes a conformed entry of the  
10 session management table.

7. The packet transferring apparatus as claimed in claim 5 wherein the second portion uses an RST of the code bit as a session closure flag, closes the session after receiving a packet in which the flag is set, and deletes a conformed entry of the session management table.

15 8. The packet transferring apparatus as claimed in claim 5 wherein without any transmission/reception of the packet for more than a predetermined time, the second portion closes the session and deletes a conformed entry of the session management table.

9. The packet transferring apparatus as claimed in claim 5 wherein  
20 when the communication form is the UDP communication, the session establishment managing table includes a UPD session establishment data table which holds bit patterns of a part of an application data portion following a UDP packet header, and the session establishment managing processor retrieves the session establishment managing  
25 table and the UDP session establishment data table to establish the session.

10. The packet transferring apparatus as claimed in claim 9 wherein without any transmission/reception of the packet for more than a predetermined time, the second portion closes the session and deletes a  
30 conformed entry of the session management table.

11. The packet transferring apparatus as claimed in claim 9 wherein

a mask data table is attached to each of the tables.

12. The packet transferring apparatus as claimed in claim 3 wherein the session management table attaches thereto indexes of a number of kinds required for each field value, and is composed of a combination of the indexes.

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